To: Director and Laboratory Staff

From: Survey and Appraisal Section, Cotton Processing Division

Subject: SURVEY NOTES

LINT COTTON

COTTON PRICES DROP SUBSTANTIALLY

The mill price of cotton (M 15/16") was 32.86 cents on February 11th as compared with 36.13 cents on January 29th. According to the Wall Street Journal cotton prices fell "in sympathy" with the marked declines in prices of grains and other commodities. There was little, however, to indicate any change in cotton's basic supply and demand statistical position. As indicated below, cotton is now priced only slightly higher than viscose staple rayon. The Government support price for M 15/16-inch cotton averages 27.93 cents per pound, as compared with a 10-market average price of 31.64 cents on February 12th. Cotton thus would have to drop substantially further before the support price would come into action.

Table 1.- Prices of raw cotton, rayon staple, and cotton fabrics, and cotton mill margins in cents

Service Court Cour	:February 11,	December	:November	:December:	Average
AN AN TOWNSTON STATE STATES OF	: 1948	1947	: 1947	: 1946 :	1939-40
Cotton, Middling 15/16"	: 134 0180 1700	SOMMES.	: 18 68 68 7	en la more	DOTHUT
delivered at mills, lb				: 33.82:	
Rayon, viscose staple,	iven du hies	ells to	: In Links	incon from:	CARL THE
equivalent price 1/, 1b	: 32.04 :	30.44	: 28.48	: 24.92 :	22:25
Cotton fabrics, average	: 906 2 300:	IN MER OW	13 45000	: 4 36 25	100 191
17 constructions 2/		95.88	: 92.76	: 79.66:	22.86
Mill Margins 3/				: Todd Jon:	
Average, 17 cotton fabrics				: 47.72:	12.68
Average, 6 printcloths					10.55
Average, 3 sheetings		: 44.44			
Average, 4 drills		34.84			
Average, 2 ducks	: - :	29.95	: 31.30	: 33.13:	13.10
	:			:	1000

^{1/} Cost to mill of same amount of usable fiber as supplied by one pound of cotton (rayon price x.89).

2/ Price of approximate quantity of cloth obtainable from a pound of cotton with adjustments for saleable wastes. (Cotton Branch, P.M.A.).

3/ Difference between cloth prices and prices (10-market average) of cotton assumed to be used in each kind of cloth. (Cotton Branch, P.M.A.)

INCREASED WORLD CONSUMPTION OF COTTON PREDICTED

Domestic mill consumption of cotton continued at relatively high levels through January. Lamar Fleming, president of Anderson, Clayton and Company, said that world consumption of cotton will probably increase for the next several years but that such an increase would require expanded world cotton production, which will depend upon "restoration of world food production,"

pacification of troubled countries like China, and immigration into the African and South American continents." (Times-Picayune, Feb. 1).

Table 2.- Cotton consumption and stocks, and spindle hours in cotton mills

			: November :	
Consumption, bales	7,339	: 7,632	: 7,220 :	7,494
Spindle activity, percent of 80-hour capacity			120.6	123.3

From Census Reports.

LACK OF FERTILIZER MAY RESTRICT 1948 COTTON CROP

Fertilizer production in the U. S. in 1948 is expected to break all records and to be double the output before the war. Nevertheless, it will not meet the demand, and cotton growers, particularly those who want to increase acreage in an effort to meet the Government's 22 million acre goal, are worried. Shortage is caused partially by exports and by heavy demands for other crops. Editorial, Cotton Trade Journal, Jan. 30,1948, p. 3.

IRRIGATION MAKES POSSIBLE RECORD CROP ON TEXAS SOUTH PLAINS

Irrigation from shallow wells is said to have played an important part in growing a record crop of 1,070,000 500-pound bales on the Texas South Plains in 1947. At present, there are about 5,300 irrigation wells and more than 500,000 acres of irrigated crops in this area. "Experienced observers... agree that there is no logical reason why, with proper techniques, complete mechanization, fertilization, crop rotation, and scientific irrigation, the West Texas High Plains should not at some time in the future produce 2,000,000 bales..."

Victor Schoffelmayer in Cotton Trade Journal, Jan. 23, 1947, p.7.

FOREIGN COTTON SITUATION SUMMARIZED

Japanese cotton consumption is expected to total about 700,000 bales this year, as compared with 730,000 bales last year, with imports of U.S. cotton restricted by lack of foreign exchange. China fears deliveries of cotton from its up country crop may be cut off by Communists. Present crop in India and Pakistan is expected to be 250,000 bales below last year, and at least 2 million bales under prewar, but mill consumption also is down almost a million bales from wartime peak. Russia is thought to have produced 2.4 million bales last year, consumed 1.9 million bales, and exported about 600,000 bales to Germany, Poland, Czechoslovakia, etc. Egypt has a crop of 1-1/4 million bales and a carryover of same amount, mostly long Karnak cotton held by Government. Egyptian crop this year is predominantly shorter varieties of uppers said to staple 1-3/32 inch to 1-5/32 inch. Mills are buying longer lengths heavily and prices have increased about 25% in the last two months. Total South American crops have not been above 2 million bales for two years,

3/4 million bales under the 1935-39 average, due to labor shortage, competition from food and feed crops, lack of water, and insect devastation. uth American consumption now runs about 1.5 million bales:

Read Dunn and Royal Brandis, NCC,

From Cotton Trade Journal, Jan. 30,1948, p. 2 South American consumption now runs about 1.5 million bales.

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COTTON TEXTILE INDUSTRY

TEXTILE MILL PROFITS HIGH IN 1947

According to a study made by the Textile Workers Union of America (said to be reliable), profits in the "textile mill products" industry reached the \$2 billion total in 1947, an amount equal to the total profits from 1929 through 1942. Profits before taxes represented 47.6% of net worth for all textile corporations in 1947 as compared with 28% average for all U. S. manufacturing and 7% for textile prewar. Textile industry earnings during the last 3 years equalled "the book value of its entire net worth." Journal of Commerce, Jan. 22, 1947, p. 12.

25,000 SPINDLE COTTON MILL TO BE BUILT IN EVANGELINE PARISH

Plans have been announced by Evangeline Textile Mills to build a 25,000 spindle mill at Reddell, Louisiana, in the heart of Evangeline Parish. Albert Tate of Ville Platte, Louisiana, is president. A 100-acre tract one mile long and 660 feet wide will be the site of the new plant which, Major F. J. LeBlanc, Ville Platte, financial counselor of the new firm, said, will be ultramodern and will "set a pattern for future textile plants in Louisiana." Present plans are to have the plant ready to begin operations in late August or the first of September. It will employ 500 to 600 operators on 3 8-hour shifts. Enough looms (500-600) will be installed to take care of the output of the spindles. Evangeline Parish produces 15,000 to 20,000 bales of cotton annually and was cited by the USDA as the one county in the entire nation producing 1-1/32 inch staple one-variety cotton entirely. The mill will be Louisiana's second.

Suthern Textile News, Feb. 7, 1948, p. 1.

Construction is expected to start within 30 days. The plant will manufacture printcloth at the beginning although tentative plans call for addition of dyeing and finishing operations and possibly some garment manufacture at a later date. Total cost will be \$2 million, of which \$1,250,000 will be spent for textile machinery and equipment (Crescent Corp., machine brokers and dismantlers, is mentioned). "Machinery has been located and negotiations for equipment are now going on." Other mill interests are understood to be involved in the company.

Daily News Record, Feb. 11, 1948, p. 22.

NEW FULTON BAG COMPANY FACTORY FOR NEW ORLEANS

The Fulton Bag Company has leased ground for a new one-story steel structure, which should be completed by mid-year. Open-mesh cotton and burlap bags were manufactured in the old plant in New Orleans, but with the completion of the new plant, paper bags will be produced also. Dily News Record, January 13, 1948, page 24.

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NAUMKEAG CONSIDERS PACIFIC COAST PLANT

For two years Pequot has had its eye on the Pacific Coast, according to Rudolph C. Dick, president of Naumkeag Stoum Cotton Company. "We are thinking of the San Joaquin valley where more than 750,000 bales of cotton are grown each year. It would make a fine location for a branch plant because, out of a total of \$13,500,000 of mechandise sold and delivered during the past year, almost 3 million dollars was sold west of Denver." The company is giving "some thought" to the manufacture of filament and staple INTILL TILL PROPERS HELDELIN 1947 rayon. Daily News Record, Jan. 26, 1948, p. 22.

PUERTO RICO GETS 3 COTTON MILLS TO LIFE OF LIVE AND THE MELTING (SIDELLES AND

Besides Textron's 25.000 spindle mill. Puerto Rico is to have an 18.000 spindle mill built by Newberry Mills, while "another textile company will begin producing sugar sacks at a new mill in the city of Ponce by July 1949. This mill alone will be able to bleach, dye and finish 2.7 million pounds of raw cotton a year." A stream of industries is said to be headed for the island, encouraged by cheap labor (25 to 30 cents an hour), favorable freight rates, exemption from all taxes for 12 years, and "made-to-order" factories for lease on easy terms. "Says one textile authority: The day may not be far off when as much as 10% of U. S. cotton weaving capacity—some 2.4 million spindles—may move to the island.

Wall Street Journal, Feb. 4, 1948, p. 1.44

(Bags for refined sugar ordinarily are made of unbleached cotton; bags for said, will be ultramodern and will "set a pattern for lut in Louisian, " Fresent plans are to have the plant ready raw sugar of jute.)

CURRENT COTTON MILL COSTS ESTIMATED TO THE TO THE TO SET US A STELL OF BROAD

Building costs today are estimated by one of the textile engineering firms of the South at \$7 to \$8 per square foot, compared with around \$2 in 1924. According to the "head of one of the largest and most successful of the older groups of mills in the South," cards owned at \$500, would today cost \$2,950 - \$3,100; spindles owned at \$8 would today cost about \$23; buildings owned at \$3.50 per square foot would today cost \$7.50 per square foot. "Total replacement would be estimated at \$125 per spindle today." Daily News Record, Feb. 7, 1948, p. 4.

TEXTILE MACHINERY Jacomples one grantices elithet not trees

WARNER AND SWASEY'S TEXTILE MACHINERY ACTIVITIES NOTED to be involved in the company,

Warner and Swasey entered the textile machinery field after reviewing 2,500 different projects and after being approached by leaders in numerous industries, according to James R. Longstreet, chief engineer of the firm's textile division. On surveying the textile industries, Warner & Swasey received "continual complaint from textile manufacturers of a lack of cooperation from textile machinery firms." He mentioned being handed statistics showing that the textile machinery manufacturing trade spent, during 1944, about one-half of 1 percent on research. "In our previous field, manufacturers spent 6 - 10 percent of gross per year for research and Warner & Swasey enters the textile machinery field with that goal," Mr. Longstreet

said. He said the company was interested in radical, productive projects where precision is a factor rather than in conventional types of equipment.

Daily News Record, Feb. 9, 1948, p. 19.

IMPROVEMENTS ON WHITIN SPINNING FRAME DISCUSSED

At present time, Whitin is building textile machinery in excess of orders, and can now foresee time when it can make immediate (about one year) deliveries. Of present 24 million spindles in U. S., about half are 30 years old or more. In near future, plastics, particularly nylon, will be used to replace cast iron and steel at some points on cotton spinning frame. Tests indicate that nylon travelers will allow higher spindle speeds, as may also rings made of oilite material. Use of ball bearings is increasing, and one shot oiling systems will become standard in near future.

J. R. McConnell, Whitin Machine Works, Daily News Record, Jan. 27, 1948, Sec. 3, p. 77.

DRAPER RESEARCH OBJECTS CITED

Draper Corp. maintains an engineering and development force of 100 men, 50 of whom are occupied on experimental projects. In addition, the firm utilizes engineering services of several other organizations. Research efforts are aimed at (1) improvement of the present type loom (new materials, including aluminum, and new designs); (2) reduction of cost of warp and filling handling (hopper and conveyor system for automatically replenishing filling bobbins in the loom battery is being tried, as is a 48-inch warp beam); (3) design of looms to weave without conventional shuttle and bobbin (aimed to at least equal efficiency of fly shuttle loom); and (4) machinery for production of non-woven fabrics (a cross-lay machine can be built successfully but not certain as to economics—hopes to have a machine built this summer).

F. N. Fitzserald, director of research, before American Association of Textile Technologists, Daily News Record, Feb. 5, 1948, p. 21.

AMERICAN VISCOSE DROPS PROGRAM OF TRICOT MACHINERY.

It was learned that American Viscose Corp. is discontinuing the tricot machine manufacturing program which has been carried on by its subsidiary, Aveco, Inc. The Aveco tricot machine is being withdrawn from sale, and manufacturing will cease when the machines presently on order are delivered. For the benefit of customers who purchase these machines, service and spare part facilities will be maintained. American Viscose Corp. will continue to act in its capacity as sales agents in the United States and possessions for the high speed tricot machine which is manufactured by F. N. F., Ltd., Burton-on-Trent, England.

Daily News Record, Jan. 27, 1948, p. 25.

SACO LOVELL NOW BUILDING TOW-TO-YARN RAYON EQUIPMENT

Saco Lowell Shops has developed a new direct tow-to-yarn machine for making spun rayon yarns from about 2,200 denier rayon tow. The machine is being used on a laboratory scale by 13 mills. Based on the Perlok system

patents, it is reported to break the filament at its weakest point, to draft it into a roving, and to spin it into yarn, all at higher than normal speeds. Another machine made by R. H. Hood Co., of Philadelphia, which manufactures sliver from a heavier denier rayon tow, is about to go into general delivery.

Daily News Record, Feb. 9, 1948, p. 20.

(Such developments are highly significant because they may greatly lower the cost of producing spun rayon yarns)

HUNT MACHINE WORKS BUILDS LOOMS

Hunt Machine Works of Greenville, S. C., is building a modernized loom, patterned after Draper's older automatic E model, and has shipped 200 to Argentina during the past year. Prices range from \$900 for 36-inch looms to \$1,000 for 44-inch looms, F.O.B. Greenville.

liveries. Of present 24 million spindles in U. S., about half are

Daily News Record, Feb. 12, 1948, p. 24.

COTTON PRODUCTS

PRODUCTION OF COTTON AND RAYON TIRE FABRICS

Production of cotton tire fabric and cord fell off very substantially from the second to the third quarter of 1947, while production of rayon fabrics remained unchanged, according to the Bureau of the Census (table 3). Cotton's percentage of the total has been as follows:

1943	83.9%	mood e	1947,	1st. qtr 61.9%
1945	53.0%	f Looms		2nd. qtr 63.9%
1946	59.4%	Least s	da od	3rd. qtr 58.3%

Table 3.- Production of tire fabric, United States, 1943-1947 (In thousands of pounds)

ED1	Contract of the last of the la	Cott	_	THE RESERVE AND ADDRESS OF THE PARTY AND ADDRE	:: Ra	Name and Address of the Owner, where the Owner, which is the Owner,	the residence of the last of t	•
		:Chafer &:						:
Year		:all cther		a last to the last like the last	::other :		walled a man day	: Total
	: woven	:fabrics:	woven	TOCLET	:: fabrics:	woven	BODSTA ME	LHUM
	:				:: :			:
1943		: 36,450:						:285,476
1944		2: 44,954:						
1945	: 160,818	3: 52,889:	63,365	:277,072	::170,594:	11,339	181,933	:459,005
1946	: 161,501	: 74,363:	74,689	:310,553	:: 212,	200	212,200 1	:522,753 1
1947 IV	rines, Si	gon sevil	Brebase	STAN ST	er ouston.	dilened	und ton	: «bego
		1: 21,815:						:150,545
2nd qtz	: 53,746	: 16,480:	23,491	: 93,717	:: 47,360:	5,486	52,846	:146,563
3rd.qtr	: 43,914	: 14,596:	15,571	: 74,081	:: 46,753:	161	52,914	:126,995
	:	: :	1	to ingit	and-he de	true	N. F. It	by F.

1/ Including small quantity of rayon fuel cell fabrics.
Compiled from Facts for Industry, Bureau of the Census.

COTTON'S PLACE IN RUBBER INDUSTRY CITED

"The use of cotton still is favored in popular size passenger car and industrial tires. Mechanical goods capacity, which now consumes a considerable

amount of the cotton fabric used by Goodyear in making conveyor belts, V-belts, hose, etc., is on the increase. Natural rubber gradually is returning to its prewar supply and new tire building techniques and engineering principles are being used which call for continued textile research and improved fabric and cord. The value of cotton tire cord, in my opinion, can be enhanced to keep pace with other developments in the rubber industry, through effective research in the breeding, growing, harvesting and processing of cotton. Needless to say, the rubber industry will continue to devote a great deal of research toward expanded uses of cotton in current and new products."

G. D. Mallory, Engineer in charge of
Textile Research, Goodyear Tire & Rubber Co.,
Journal of Commerce, N.Y., Jan. 28,1948,p.22B

COTTON DUCK PRODUCTION OFF DRASTICALLY: PRINT CLOTHS ONLY SLIGHTLY

A total of 2,280 million linear yards of cotton broad woven goods were produced during July - September 1947 as compared with 2,461 million yards in April - June 1947, and 2,193 million yards during July - September 1946. There were declines during the previous 3 months in the production of all types of fabrics, ranging from 26% in cotton duck products to only 3% in production of print cloth yarn fabrics.

SUSTAINED POSTWAR DEMAND FOR COTTON TEXTILES SAID TO HAVE RESULTED FROM DIVERSION OF 13 BILLION YARDS TO WAR AND EXPORT DURING 1942-45

According to a study made by the Cotton Textile Institute, 51.4% of all cotton goods made during 1942-45 went to war use and exports. This caused an accumulated loss to consumers during 1942-45, as compared with prewar 1937 and 1939, of 13,286 million yards. Such a drastic reduction has led to the "sustained demand" since the war "which has confounded the analysts."

Table 4.- Distribution of wartime production of cotton broad woven goods (Million of linear yards)

Year	Production:	TATA AND TIME	Available in Normal	Decree and Com Assessing to the comment
1937 1939 1941 1942 1943	8,287.3 : 10,431.9 : 11,108.3 : 10,582.2 : 9,546.7 : 8,711.7 :	236.2 : 367.5 : 593.0 : 5,485.3 : 5,517.6 : 5,789.6 : 3,752.2 :	8,425.1 7,919.8 9,938.9 5,623.0 5,064.6 2,757.1 4,959.5 8,352.0	98 - 49 95 - 49 51 : 49 48 : 52 39 : 61 57 : 42

Compiled from a report of the Cotton Textile Institute.

Southern Textile News, Jn. 31 108

USES OF USTEX AND ASBESTON YARNS GIVEN CAROLINA LINE BE AL . JASELY CHORECE

According to an article by W. O. Jelleme, following are uses of U. S. Rubber's Ustex and Asbeston yarns:

USTEX - Developed successfully for aircraft webbings,
hydraulic hose, air hose, spray hose, industrial
sewing threads, seine lines, safety belt webbing,
V-belts, conveyor belting, fire hose. Outstanding is a conveyor belt, 250 to 400% stronger than
previous rubber belts, made of a new fabric construction of nylon and Ustex yarn, for use in
mines, quarries, etc.

ASBESTON- Noven from fine asbestos yarn by process developed in U. S. Rubber Lab. Now being produced for
ironing board covers, home electric iron covers,
and many industrial uses. Combined with glass
fiber in draperies; with cotton yarn in Carosel.
dish towels.

Daily News Record, Jan. 27, 1948, Sec. 3, p. 42.

COTTON-FOR-PAPER PROGRAM RESUMED AS THE RESUMED A TARE TO THE START STAR

The cotton-for-paper program to encourage the use of low grade cotton in the manufacture of paper was resumed by an announcement of the Department on January 30. Two cents per pound gross weight will be paid to "rag-content" paper manufacturers on raw cotton and mill waste used under the provisions of the program. The maximum quantity which can be used is 10 million pounds or the equivalent of about 20,000 bales.

Weekly Cotton Market Review, Feb. 6, 1948.

BURLINGTON INTRODUCES NEW COTTON FABRIC; IS NOW MAKING ARMY CLOTHS FOR CIVILIAN USE

39, of 13,286 million pards. Such a trastic reducti

The "Galey and Lord" organization, now part of Burlington, has introduced some "entirely new postwar cottons that are significant." Cited is a new cloth called "Lumina," "actually loomed with aluminum," which is said to add "a new dimension' to styling possibilities. (Sample on file in S.& A. Section). Also mentioned is the application of plastic and resin finishes to gingham—to increase crease resistance and also improve texture and shrinkage control, resulting from 'setting' of fibers." Burlington is now making Cramerton Army cloth (Army 5 oz. shirting) whondike (the Army's 902 sateen), and Mufti cloth (also an Army 5 oz. shirting) in civilian colors for collegiate trousers, shorts, jackets, great coats, etc. "Men who before the war were used to cheap carded cottons became educated to the 2-ply combed fabrics, while in the service."

Article by Robert L. Huffines ... Daily News Record, Jan. 27, 1948, Sec. 3, p.14.

AMERICAN VISCOSE MAKES ELASTIC THREAD

American Viscose Corp. is making a new product called Filatex, consisting of a rubber or latex core made at the Sylvania Division's plant at Fredericks-burg, Va., covered by winding cotton or rayon thread around it at the Roanoke plant. It is sold through a subsidiary, the Filatex Corp., N. Y. Southern Textile News, Jan. 31, 1948, p. 42.

CONTINUOUS RAW STOCK DYEING OF COTTON WITH VAT COLORS PREDICTED

According to J. H. Hennessey of General Dyestuff Corp., before annual meeting of the Textile Division of the American Society of Mechanical Engineers, attempts to dye cotton raw stock with vat colors continuously are being made and, with the knowledge available on continuous piece dyeing methods, it seems like a safe prediction that a satisfactory method will soon be developed using the endless belt system. Complete text of his talk is given.

American Wool & Cotton Reporter, Jan. 22, 1948, p. 11.

COTTON USE IN BAGS UP IN 1947 WITH GAINS IN DRESS PRINT AND OPEN MESH BAGS

A total of an estimated 750 million yards of cotton fabric were cut up for bags in 1947, according to H. P. Claussen, vice president, Bemis Bro. Bag Co. (As compared with an estimate of 702 million yards last year; 938 in 1945). Use of dress print bags spurted to an all-time high with estimates running between 100 and 150 million yards. Development of a paper "band label" which readily soaks off, making it unnecessary to print brands on fabric, aided in the increase. "Phenomenal growth has taken place in the so-called open mesh bag." The battle between paper and cotton flour bags "may turn out to be the packaging battle of the century." To retain this market for cotton, a comprehensive and costly promotional and advertising campaign is underway to demonstrate that the cotton container's cost to bakeries can be reduced to little or nothing. Problem "is to move onceused 100-lb, cottons either in the grey or in diess print form to housewives and to inform them enmasse that they are not only highly useful but readily available." Demand for laminated textile bags for packaging dry milk solids is increasing, and they also are used for chemicals, hybrid seed corn, etc. It is forecast that textile bag industry will consume between 700 and 800 million linear yards in 1948 and years immediately ahead, thus remaining one of leading outlets of cotton textile industry. Journal of Commerce, Jan. 28, 1948, p. 8A.

EXPERIMENTS ON WRINKLE RESISTANCE DETAILED

Improvements made to increase ability of separate filaments in fabric to recover from stretching, paralleled exactly the improvement in wrinkle resistance of the fabric, according to Dr. Irving J. Gruntfest and D. D. Gagliardi of Rohm & Haas before Philadelphia Section of american Chemical Society. They declared that any fabric's resistance to stretching depends on the fineness of filaments in the yarn; the ease with which they are able to move in relation to one another; and their ability to recover from stretching without being permanently deformed. Partial stretching of separate filaments is produced by folding. Chemical treatments can increase wrinkle resistance, it was reported, on basis of experiments on hundreds of fabric samples, but only when they penetrate the filaments. Deposits on surface merely interfere with movement of the filaments.

Daily News Record, Jan. 23, 1948, p. 10.

FUR BLENDED WITH COTTON AND OTHER FIBERS

"Unique Fibers, Inc." are said to blend fur with wool, rayon, and cotton, using a chemical process which increases frictional coefficient of the fur; eliminates excessive fly in spinning, and makes possible spinning on

cotton, worsted, and wool systems. Characteristics of fur fibers from mink, muskrat, raccoon, squirrel, wolf, and opossum are outlined. Furblended items now on market include men's hose, pajamas, sweaters, underwear, gloves, ties, jackets, bathrobes, etc.

Daily News Record, Jan. 27, 1948, Sec. 3, p. 74.

COMPETITIVE MATERIALS

THE RESERVE THE RE

VISCOSE RAYON OUTPUT INCREASES 11% IN 1947; ACETATE, 22%

Production of rayon increased 14 percent during 1947 over 1946, according to the Rayon Organon, and it is estimated that capacity of the industry in October 1949 will be 21 percent greater than the 1947 production. Increases by type of product are shown in table 5. It is significant that most of the contemplated increase in capacity is for acctate rayon.

Table 5.- Rayon production 1946 and 1947, and expected rayon capacity, October 1949, by types, United States

medicine applies and interest interest	N FARRE I	127 12	State of	The same	A STATE OF L
sure will have been a sure	Produ	ction :	Expected:	Percent	: Percent
The state of the s	1946 :	1947 :	Oct. 1949:	change	: change
Product :	Wilder Wil:		capacity:	1946 to	: 1947 to
			Marie Dia ne		
			lied service		-
	A PERSONAL PROPERTY AND ADDRESS OF THE PARTY A	the state of the s	Million:	THE RESERVE AND PERSONS ASSESSMENT OF THE PE	the state of the s
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their conference of the same of			Parametri 7	1. 10 21.700	N. D.
	-	and the second	A SHEER .	2 2 2 1 115	ICE MARC
Viscose plus cupra:				7 .	11
Acetate		221.5:		12	
Total				10	<u>45</u> 20
Staple and tow:				10	20
Viscose			178 :	27	
				27	. 477
Acetate	43.7:	60.2		38'	07
Total	1/0.4:	228.4:	278 :	30	: 22
Motol and a series of the seri	100 0	(00	D.C.		
Total viscose plus cupra:			753	. 11	: 9
Total acetate:		-	422 :	22	50
GRAND TOTAL:	853.9:	975:1:	1,175 :	14	: 21
	a two to . To:	ed a vine:	Jens Da :	DATE TOUT	A PORT A SPECIAL

Compiled from Rayon Organon for Jan., Feb., 1948.

HIGH TENACITY RAYON OUTPUT SHIFTED TO HEAVIER YARNS

Production of high tenacity viscose rayon yarn increased moderately from 1946 to 1947, with the industry shifting to a considerable extent from 1100 denier yarn to "1375 and over." It is expected that capacity will increase to 270 million pounds by October 1949.

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Table 6.- High tenacity rayon: Production and expected capacity, United States

•		Produc	tion	:Capacity
	1944	1945	1946	1947 :Expected :Oct 1949
1100 denier (1000 to 1374): 1650 denier (1375 and over) Total high tenacity 1/:	9.4:	17.6:	76.6:	123.9:

1/ Including other deniers during some years. Rayon Organon, Jan., Feb., 1948.

WORLD RAYON PRODUCTION REACHED 2 BILLION POUNDS

World production of rayon yarn reached a new high in 1947 as a result of high production levels in Western Europe and continued expansion in North and South America. Following are the Organon's figures:

			Million	of pound	ls		
	Yarn ·	Staple	Total		Yarn	Staple	Total
1941 1942	1,181 1,270	: 1,288 : 1,555 : 1,455	2,469 2,825 2,651 2,533	1944 1945 1946	1,031 901 1,103	: 515 : 569	2,067 1,416 1,672 2,000

nayon organon, rep. 1946

SPUN DYED ACETATE STAPLE TO BE INTRODUCED SHORTLY

In the staple fiber field, considerable interest is now being displayed concerning the imminent introduction of colored staple fiber. Some companies currently are engaged in development work along this line, and it is anticipated that within the next few months staple in a number of different colors, other than black and white, will be available on the market. Observers of trends in the staple division are of the opinion that it is only a matter of time before 1.5 denier per filament will be offered, due to the increasing demand for finer yarns.

"Acetates Feed Hungry Warket," Daily News Record, Jan. 27, 1948, Sec. 3, p.16.

RAYON PLANT COST ESTIMATE GIVEN

A number of large textile concerns have considered entering the rayon industry in order to obtain sufficient rayon, but lack "know-how," require a large amount of capital, and fear present producers. At present, a new rayon plant costs about \$100,000 for each 60,000 pounds of filament rayon or 200,000 pounds of staple.

Henry Von Kohorn, Jr., Journal of Commerce, Jan. 28,1948,p.12

USES OF RAYON TOW OUTLINED ...

Rigidal tow is made in two general categories; namely, small-size tow, with a denier range of 1,000 to 5,000 denier, and large-size tow, having over 40,000 total denier. Uses are as follows:

Small-size tow. - Made directly into yarn by several methods which eliminate opening, picking, carding, etc. Yarn used for weaving and knitting.

- Large-size tow. (1) Used as packing, replacing flax and hemp, in cold and hot water pumps, rods, plungers, rams and accumulations.
- (2) Cut into rayon flock (0.20 to 0.100 inches in lengths. Used to produce suede, pile, and napped effects on fabric or paper for use as table covers, phonograph turntable covers, upholstery fabrics, acoustical fabrics, linings for drawers, caskets, cabinets, etc. Also used on metal, wood, glass, etc., for sidewalls in auto trunks, glove compartments.

(3) Cut into short lengths for manufacturing paper for strength and bonding purposes; example, tea bags.

(4) Converted into sliver, top, or roving, for subsequent manufacture into yarns for weaving and knitting.

Rayon Organon, Jan. 1948, p. 10

SYNTHETICS INVADING CARPET FIELD

A. G. Ashcraft, director of Research and Development for Alexander Smith & Sons Carpet Companies, advised the rug cleaning industry to keep abreast of use of synthetics for floor coverings. "Today, tire-cord rayon warps, Kraftcord filling and stuffers are competing with traditional cotton and jute yarns in carpet backs. Synthetic sizes are competing with starch. Printed felt type rugs grow in volume, and textured, irregular surface rugs increase in almost startling variety. Carpets having fiber held in by adhesives instead of only backing yarns are in production. The traditional all-wool face continues under attack by the ever-advancing research of the synthetic fiber producing industries. It may succumb in the future since historically the synthetics appear to always win."

Daily News Record, Feb. 4, 1948, p. 31.

NEED FOR SEVING RESEARCH ON RAYON FABRICS SEEN

The rayon industry should interest itself in research on correct practices for sewing rayon fabrics, it is declared in the trade. This comment was brought forth by the report on preference in fabrics by the Department of Agriculture's Bureau of Agricultural Economics, based on questioning of 1,782 women. A dispatch from Washington stated that Federal researchers had concluded from the replies that a majority of homemakers favor cotton over rayon in respect to longer wearing qualities, ease of laundering and because, it was stated, the cotton was less likely to pull and fray at the seams. It was said that pulling out and fraying at the seams is not a reflection on rayon itself but brings out the fact that the time-honored sewing methods used in making cotton garments are not altogether applicable to rayon.

Daily News Record, January 5, 1948, p.28.

RAYON PRODUCTION TIME CUT SEVERAL DAYS BY NEW METHOD

According to Uscar Von Kohorn of the Oscar Von Kohorn and Co., Ltd., "We have developed a new rapid aging and spinning process for rayon which reduces by several days the time necessary to produce yarn in conventional processes used throughout the world. . . Our new process reduces this period of aging by several days. The new process is not yet in commercial production but it will be shortly."

Journal of Commerce, Jan. 15, 1948, p. 14.

ACETATE FIBER NO LONGER CALLED RAYON BY TENNESSEE-EASTMAN-

Tennessee-Eastman Corp. has discontinued using the term "rayon" to apply to its cellulose acetate yarns and fibers. James C. White, president, said "Two very different textile fibers are now being offered to the public as 'rayon'... It is unfair to offer two such diverse textile materials to the public as if they were one and the same substance, especially under a name which for a long time connoted only one." This action marks a break from F.T.C. trade rules promulgated in 1937. (And should be considered in light of Celanese's refusal to call their acetate fiber "rayon").

Daily News Record, Jan. 27, 1948, p. 1.

SARAN NO LONGER TRADEMARK; NOW A GENERIC TERM

Saran is now a generic term for a group of resins. Dow Chemical Co. announced that it had formally released its trade mark rights.

Daily News Record, Jan. 20, 1948

BROADER USE SEEN FOR NYLON STAPLE

Nylon fibers used in combination with wool and cotton are making their way into apparel, home furnishings and industrial woven cloth as a result of expanding production at the Dupont Company plant here. A preview of products soon to make their wholesale and retail debuts was staged here today by company engineers.

New fabrics which promise increased consumption of nylon staple fiber, in combination with wool and cotton, will seen appear in many new lines of sweaters, childrens apparel and sportswear as well as upholstery fabrics and hand knitting yarns. They will also make possible the production of lighter weight worsteds for men's and women's wear, it was said. Combined nylon and wool fibers will make a 6-1/8 ounce cloth available, according to Dupont engineers. In the industrial field nylon felt for use in laundry machines and by paper makers will be available shortly. Nylon industrial fabrics will also include polishing cloths; nylon duck for use in filter fabrics, in work gloves and work clothing, and for conveyor fabric in harvesting machines. Studebakers! 1948 models will sport nylon fabric upholstery, it was revealed.

Journal of Commerce, January 23, 1948, p. 14.

PLASTIC COATED FIBERGLAS BEING PROMOTED FOR SEAT COVERS: OTHER NEW USES CITED

Fiberglas Corporation at present is developing commercially "plasticcoated Fiberglas yarns, consisting of a core of dyed Fiberglas yarn
covered with a transparent plastic film," making these yarns usable in

where their unique combination of properties—non combustibility, dimensional stability, high tensile strength, imperviousness to rot, etc.—is highly desirable, but where it has not hitherto been practicalbe to use them because of insufficient resistance to abrasion. Wide use of the film-covered yarns is foreseen for . . .automobile and public transportation seat covers, upholstery fabrics, and outdoor furniture webbing." An automobile seat cover revealed "no sign of wear after 250,000 double rubs with standard equipment. Tests showed that the cover had no greater abrasive effect than wool upholstery fabrics." Before the plastic film is applied, the Fiberglas yarns are coated with a thin protein film (gelatine type) making it possible to dye them with ordinary dyes and by commonly used methods. Principal use of such yarns without plastic cover is as identification yarns in elastic wires and cables.

Among applications of Fiberglas yarns brought to production state in 1947 are:

Waterproofing membrane reinforcement. Open mesh fabric for impregnating with bitumen for roofing application.

Gasket materials.—Including a flanged gasket, consisting of a braided sleeving and a flat, braided flange for sealing oven doors on kitchen ranges.

Paper reinforcement. - Yarns are laid parallel or diamond shape between two sheets of Kraft paper, which is then asphalt-treated. Used for lining and shipping cases, wrapping furniture, etc.

Daily News Record, Jan. 27, 1948, Sec. 3, p. 30. ..

U. S. WOOL CRISIS PREDICTED

According to Governor Lester C. Hunt of Wyoming, that state will be out of the wool business by 1951 "if the present sharp decline in sheep raising continues." He added that the entire west faces the same crisis, placing part of the blame on the Forest Service, asserting that "it comes in year after year with a lessening number of (grazing) permits."

Wall Street Journal, Jan. 26, 1948, p. 8.

ROCKY MOUNTAIN WOOL COUNCIL TO BE ESTABLISHED.

Immediate establishment of a Rocky Mountain Wool Council has been voted by delegates attending a Mountain States Governors Conference on wool processing. Its purpose is to develop a western wool industry. Governor Knous of Colorado urged research projects on marketing, transportation, and development of new wool products, rather than into the relatively simple problem of wool processing. Dean John A. Hill of the Agricultural College, University of Wyoming, urged a step-by-step program starting with plants for manufacture of tops—a product "as uniform, marketable, and standard as wheat flour or gin cotton."

Daily News Record, Jan. 26, 1948, p. 1.

SOYBEAN FIBER PROGRESS BY DRACKETT DISCUSSED

According to The Drackett Co.'s Annual Report for 1947, their Azlon fiber "did not meet the higher quality standards" set in the textile industry in

early 1947. "It became apparent that to attempt the marketing of our product under these changed conditions, even though quality was improved over that considered satisfactory a year before, might inflict permanent injury on our product's potential. We, therefore, reduced our production to an experimental level. Orders were placed for new equipment and work was started on the redesigning and rebuilding of some equipment already in the plant. . . We do not know how long it will take to develop a going operation in Azlon . . . But we know that there is a most attractive potential market for Azlon when perfected . . . We continue to carry on an aggressive program of research and plant development and that program is obtaining important results. It is our judgement that we should not aggressively market a product that is merely salable, but rather proceed slowly with that phase of the program until research has established a quality and dependability that will make this Azlon product as highly appreciated in the textile industry as other Drackett products are elsewhere."

PAPER BAGS MAKING PROGRESS AS PACKAGE FOR FLOUR

According to a memorandum of St. Regis Bag Co., a total of 52 million paper bags were sold for shipping flour in 1947, and it is estimated that a minimum of 108 million paper bags will be needed for 60% of expected total shipments of flour in 1948. St. Regis is working to get dealers to handle used paper bags for repulping purposes. In 1947, Minnesota banned re-use of textile containers for packaging food products unless bags had been properly laundered. A short time later, Oklahoma revived its law which requires new containers for packaging flour. Georgia prohibits using unlaundered bags and Texas, Kansas, N.W. York, and New Jersey have similar regulations to go into effect early in 1948. Similar regulations are being considered by California, Missouri, Montana, Illinois, and Colorado. "These state regulations plus the work of the U.S. Food and Drug Administration have given a tremendous impetus to the use of the one-trip (paper) container by the milling industry."

TEXTILE RESEARCH AND EDUCATION

\$4 MILLION RAISED FOR TEXTILE SCHOOLS

According to a compilation as of January 1st, made by the Daily News Record, between four and five million dollars have been raised for the N.C., S. C., and Georgia textile schools as follows:

NEW TEXTILE SCHOOL OPENED IN ONTARIO

The Ontario Department of Education has opened a new "Provincial Institute of Textiles" at Hamilton, with only evening, part-time courses the first year but with a full two years' college accredited course planned.

Southern Textile News, Jan. 31, 1948, p. 57.

COTTONSEED AND PEANUTS

VIRGINIA-CAROLINA CHEMICAL CORP. PURCHASES ARALAC PLANT

Transfer of the National Dairy Products "Aralac" plant at Taftville, Connecticut, to Virginia-Carolina Chemical Corp. was to take place on Feb. 17, A. Lynn Ivey, President of the latter company said. Virginia-Carolina Chemical Corp. has engaged in vegetable protein fiber research for many years and has operated a pilot plant at its Carteret, N. J., research laboratory. According to W. P. terHorst, general manager of the fiber division of the company, the protein staple fiber developed as a result of this research is believed to be the first of its kind to be produced commercially in the world. It is believed that the fiber, to be known as Vicara, will find wide acceptance for many uses in the textile and related industries, he states. Mr. terHorst will make his headquarters at Taftville.

The firm's directors have authorized a 3 to 5 million dollar bank loan to finance purchase of the Aralac plant of National Dairy Products, Mr. Ivey said, but that proceeds would also be used for other capital outlays. The Connecticut plant utilized skim milk. Virginia-Carolina plans to use vegetable protein, probably from peanuts, as a lower cost material.

Daily News Record, Feb. 10, 1948

FATS WILL CONTINUE TO HAVE BIG SOAP MARKET DESPITE COMPETITION FROM SYNTHETIC DETERGENTS

Because main raw material for soaps is a byproduct, fat, there will always be a big soap market. With present high soap prices relative to synthetic detergents only temporary, according to Kenneth T. King, manager of Fine Chemical Division of Dupont. "Most important improvement in synthetic detergents in 1947 was the use of carboxyl methyl cellulose. It prevents or reduces the redisposition of solid soil once it has been removed from cotton garments with result that synthetic detergents containing this chemical will do the heavy duty cotton washing job about as well as soap."

Journal of Commerce, Jan. 30, 1948, p. 12.

OIL AND LEAL PRICES DROP

Prices of vegetable oils and oilseed meals have declined very substantially during the last three weeks but are still generally up to late 1947 levels, and far higher than they were during the war (table 7).

Table 7.- Average Prices of specified crude oils and meals, United States, 1939-48

The second second					
世紀	Oils	(crude)	per pour	nd 2/ :	Meals per ton 7/
Crop :	Cotton-:	Soybean	Peanut	Linseed:	: Cotton-: Soyoean: Peanut : Linseed
year 1/:	seed 3/:	4/:	: 5/	6/:	: seed 8/: 9/ : 10/ : 11/
	Cents:	Cents	: Cents	Cents:	: Dollars: Dollars: Dollars
AVERAGES:		19. 19. 19. 19	100 to 100 to		to remain making the state of the
1939 ::	-5.6 :	.5.0.	: 6.2		
1940 :	6.5 :	7.0	7.8	9.5 :	: 26.66 : 30.49 : 25.55 : 27.04
1941 :	12.3 :	11.2	12.7	12.1:	: 36.61 : 41.87 : 40.57 : 37.42
1942 :	12.8 :	11.8	: 13.0	14.2 :	: 37.80 : 42.80 : 40.57 : 42.43
1943 :	12.8 :	11.8	: 13.0	15.2 :	: 48.54 : 51.91 : 53.00 : 45.33
1944 :	12.8 :	11.8	. 13.0	: 15.1 :	: .48.50 : 52.00 : 53.08 : 45.50
1945 :	12.8 :	11.8	: 13.0	15.5	: 55.06 : 62.39 : 60.16 : 47.50
1946 :	24.8 :	22.9	25.3	30.7 :	: 74.55 : 80.90 : 72.19 : 80.65
1947 :	1 :				
Aug. :	18.5 :	15.9	19.2	29.1 :	: 83.25 : 91.90 : 80.00 : 77.90
Sept.:	20.6 ::	18.8	20.8	30.3:	: 89.90 :102.70 : 89.15 : 87.70
Oct. :	21.4 .	20.7	22.5	31.9:	: 86.90 : 91.05 : 88.75 : 89.25
Nov. :	26.6 :	25.6	27.8	32.7 :	: 90.80 : 92.90 : 88.65 : 88.75
Dec.12/:	26.5 :		26.5	34.6:	: 97.15 :101.50 : 89.50 : 94.80
Jan 19 13/:	29.0 ::	27.5	29.0	: 34.3 :	: 98.00 :112.50 : 96.00 :105.00
Heb. 9 14/:	22.0 .:	17.5	23.0	32.3:	: 90.00 : 85.00 : 93.00 : 88.00
	" H H				
	Name and Address of the Owner, where the Party of the Owner, where the Party of the Owner, where the Owner, which is the Owner, which	The second lives and the second		Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner,	

^{1/} Crop years beginning August for cottonseed products; October for soybean

STATISTICS GIVEN ON OILSEEDS CRUSHED AND PRODUCTION OF CRUDE OILS AND MEALS PRODUCED DURING 1930-47

Quantities of oilseeds crushed, and production of crude oils and meals during the last several years are shown in table 8. Note that the tonnage of soybeans crushed has increased by nearly five times since 1935-39 while the tonnage of peanuts crushed has increased only slightly and the tonnage crushed of cottonseed and flaxseed has declined.

products; September for peanut products; and July for flaxseed products. 2/ Crude tanks, F.O.B. mills except noted. From Oil Paint and Drug Reporter (daily quotations) and from Fats and Oils Situation, BAE (monthly and yearly averages).

^{3/} F.O.B. SE. Mills.

^{4/} Midwestern Mills.

F.O.B. SE. Milling points. 6/ Raw, drums, carlots, N.Y.

^{7/} Bagged, carlots. As given in Feedstuffs (daily quotations) and Feed Situation, BAE (monthly and yearly averages)." 8/ 41 Percent protein, memphis.

^{10/45} Percent protein, F.O.B. SE. milling points.
11/32 Percent protein, Minneapolis.

^{12/} December 15 quotations for oils; and monthly for meals.

^{13/} January 19 quotations for oils, and January 17 quotations for meals. 14/ February 9 quotations for oils, and February 7 quotations for meals.

Table 8.- Quantities of oilseeds crushed and production of crude oils and meals United States, 1930-46, and monthly figures for 1947 crop year.

											*		: .			
	31.	Linseed	1,000 tons		1,05	- Land	911	790	585	515	40 40	: 23	3년:	. 56	त्रा	July for (shelled):
	n of meal		1,000 tons		20.02		134	100	75	11/1	200	v.	1 1	7	ਨੋ	tons (she
	Production of	Soy-	1,000 tons		9119		1,543	3,200	3,682	3,728		269	250 : 273 :	349	21	in
		Cotton-:	1,000 tons		2,032 :	**	1,954:	1,995	1,954 :	1,434:		47 :	156 : 301 :	277 :	562	for
	(crude):	: seed:	1,000 tons		269	8	354	101	317 :	: 168 527		15 :	202	. 31 :	23	September ushing as 1
	oil (c	Peanut :	1,000 :		11.		. 38	69.05	57:	8.2		2.	 	. 7	ω.	for cr
and the	ction of	Soy- : bean :	1,000 :	•••	21 :	••	282 :	603	673 ::	707 : 761 ::	•• ••	53 ::		67 :	202	r for
	Production	: cotton-:	1,000.	200	700 :	•••	713 ::	701 :	. 299	709 1486	6 63 (885)	15 :	2,66	91 :	87	le October
		Flax-:(1,000 :	•• ••	626 :	••	1,026:	1,239:	920 :	691:	•• ••	. 37 .	85	89 :	65 .	cottonseed, Octobe
	s crushed	Peanut :	1,000 :	•• ••	2		279 :	195	9.	133 :		. 2	75	10 :	: : ਨੋ	st for con
	Quantities	Soy :I	1,000 tons		1,064 ::	••	1,922 :	1,269	4,602 :	1,784 : 5,104 :	461	339:	342 :	140 :	157 :	ng in August for Mot including No.
132	91	:Cotton-:	1,000 t	30	4,474:	•	4,398 :	4,498 :	4,254 :	3,262:	•• ••	102:	55	2969	565 :	beginning
	100	Year :0	allo Cies	CROP YEAR 1/ :	1930-34 :	Annual totals:	1940	5/16	* 176	945	1947	Auge	Sept.	Nov.	Dec.	Crop year be
1				CRC		AI		-								I

1943, 13,000; 1944, 101,000; 1945, 117,000; 1946, 80,000; August (1947), 2,533; September tons. (1947), 1872; October (1947), 4,017; November (1947), 10,366; and December (1947), 9578. No data. 1945, 15,000; 1944, 101,000; 1947, 111,000; 1940, 00,000; nucleus (1947), 1872; October (1947), 4,017; November (1947), 10,366; and December (1947), 9. From data in Agricultural Statistics, 1930-44; and from Facts for Industry, Bureau of Census, and reports of Bureau of Agricultural Economics, 1945-47.

LINTERS AND CELLULOSE

The price of purified linters declined slightly from December to January, while wood pulp prices remained unchanged. Purified linters were 4.4 cents higher per pound than acetate grade wood pulp in January 1947, as compared to 3.3 cents higher in 1946 and 1.6 cents higher in 1940.

Table 9. Average annual prices of purified linters and dissolving wood pulp, 1940-47, and current quotations December 1947 and January 1948.

	Cents pe	r pound		
			Wood pulp 2/	
	: Purified : : linters : : 1/ :	Standard viscose grade	:High-Tenacity: : viscose : : grade :	Acetate & cupra grade
1940 1941 1942 1943 1944 1945 1946 1947 1947, Dec. 1948, Jan.	6.6 7.6 8.2 9.2 8.8 8.7 9.5 16.3	4.1 4.2 4.2 4.2 4.6 4.8 5.6 7.0 7.45	5.0 5.0 5.0 5.0 5.0 5.0 5.0 7.90 7.90	5.0 5.0 5.0 5.2 5.5 6.2 8.0 8.60 8.60

^{1/} Weighted averages, 1940-47. Compiled from letters to us from a producer. F.O.B. pulp plant.

^{2/} Averages of average monthly prices, 1940-47. Compiled from Rayon Organon and from letters to us from producer. Wood pulp prices are F.O.B. domestic producing mill, full freight allowed, and 3% transportation tax allowed, Dec. 1, 1947 on; freight equalized with that Atlantic or Gulf port carrying lowest backhaul rate to destination plus 3% of backhaul charges, prior to December 1st.

RECTUDING OND SERVICE

The period of partitied linters doctions simple to all the ballets to linter were all cents while wood calls prices remained anomanged, Tarified linters were all cents light per pound than accetate grade we si pulp in Johung 1947, as compared to 3.3 cents higher in 1946 and 1.6 cents nicher in 1940.

Table 9. Average annual prices of purified linters and dissolving wood puld, 1910-47, and current quotations December 1917 and dominy 1948,

Lente por pount				
ta gang book				
**************************************		seuochv grado	: bodines :	
0.2	5.0 s 5.0 s 5.0 s		8.6 : 8.7 : 8.7 : 8.8 : 8.8 : 8.7 : 8.8 : 8.7 :	1874 1872 1872 1873 1873 1873 1873
00.8	000.00 000.00	7.05	15.05	1968, Jan.

And the state of t

F.O.B. pulp Mont.

Averages of everage mintally prices, 1910-47. Compiled from Hayon Organian and from letters to as from producer. Need pull prices are 7.0.8. donest the production with allowed, and 1. transportation for allowed, Dec. 1. 1967 on freelyht equalized with that Atlantic of Odif pore carrying lowest tocknowl rate to destinable a plue 3% of backnowl charges, prior to December 1st.